REMARKS

The Examiner rejected claim 26 under 35 U.S.C. §101 as non-statutory. This claim has been amended to render it statutory by claiming a computer-readable medium comprising a computer program.

The Examiner rejected claims 14, 19, 24, 25, 26, and 28 under 35 U.S.C.§102 as anticipated by Huber.

Claims 15, 18, and 20-23 are rejected under 35 U.S.C. §103 as unpatentable over Huber further in view of Darel.

Claim 14 distinguishes over either Huber alone, or Huber combined with Darel in a number of ways. First, claim 14 recites a reference value in a segment of a *reference* image describes the color property being associated with the pixels arranged in the respective segment and the color properties of the pixels of the real image are compared with the corresponding reference values of the reference image. Huber in column 1, lines 55-60 and column 4, lines 60-65 discloses that inspection areas 13 *of an image subject* (not a reference image) can correspond to zonal grouping of color zones of the printing unit of a printing press. Such color zones are known in offset printing presses as being certain zones in which the amount of color can be individually controlled. Each zone has a certain width in Huber. If the inspection areas in Huber correspond to the color zones, each zone can be individually adjusted. However, these color zones are not of *a reference image;* and also have nothing to do with a reference value describing a color property associated with the pixels arranged in the respective segment of a reference image as recited in claim 14. Thus in claim 14, the pixels of the respective segment of a reference image exhibit approximately a same color property. Therefore claim 14 readily distinguishes.

Claim 14 further distinguishes by reciting that the segmenting of *the reference image* comprises the steps of: 1) successfully processing the pixels of the reference image, 2) reading out reference values of already processed adjacent pixels to the pixel which is to be processed, 3) determining which of the reference values is most similar to a color property of the pixel which is to be processed, and 4) if a difference of said reference value and the color property is less than a predetermined threshold, the pixel which is to be processed is associated with the segment that contains the pixel whose reference value is nearest to the color property of the process pixel, otherwise the pixel which is to be processed forms a core of a new segment. Huber discloses none of these steps for segmenting of a *reference image*.

The above steps for segmenting the reference image are disclosed in Applicant's Substitute Specification beginning at page 10, line 19 through page 11, line 15.

The Examiner also cites Darel, not against claim 14, but rather in combination with Huber with respect to claims 15, 18, 20-23. Specifically, the Examiner cites Darel at column 9, line 56, step 194, Fig. 9, and column 9, line 65 through column 10, line 10. At column 9, line 50 Darel teaches dividing the image into regions of constant color. However, Darel nowhere discloses the aforementioned four specific sub-steps for segmenting of the reference image recited in claim 14. These four sub-steps are important as explained hereafter and provide a significant advantage over Darel combined with Huber.

Darel discloses a color control system for maintaining the color of a printed page of a printing press constant. As illustrated in Fig. 7 the image comprises a sample key 90 which is a zone of a certain width. In such a sample key 90 a plurality of regions of interest (ROIs 92) are determined (column 8,line 13 to 16). The ROIs

are generated by an image segmentation algorithm (column 9, line 35, 36). The function of the image segmentation algorithm is to divide the image into regions of constant color, as perceived by the human visual system (column 9, line 49 to 51). As a segmentation algorithm the K-mean clustering algorithm is used (column 9, line 56 to 61). The K-mean clustering algorithm is an iterative algorithm. It is a simple and completely automatic algorithm. However, this algorithm requires, due to its iterative characteristic, a certain amount of time to repeat the segmenting steps.

In an offset printing press, a certain image is usually printed thousands of times. This means that a reference image has to be segmented once and the segmented reference image can be compared a plurality of times with each printed page. As the once segmented reference image is used a plurality of times there is a lot of time to segment the next reference image for the next picture.

In digital printing systems, the content of each page is often changing. The known method of Darel cannot be applied to digital printing systems claim 14 recites "digitizing real image"), because the segmenting of the reference image cannot be carried out in real time.

In digital printing systems, it is necessary to segment automatically a new image very quickly to be able to print a plurality of different images each with a low number of copies.

Claim 14 recites the four sub-steps for a segmenting algorithm which accomplishes these requirements. By this algorithm each pixel is only calculated once. There is no iterative repetition of the processing of the pixels. Thus, this algorithm can be carried out on-the-fly. This algorithm is very simple, fast and yields very good results for the purpose of monitoring printed images. This algorithm

allows for monitoring of printed images where the real image is digitized which prints a plurality of different images with a low number of copies.

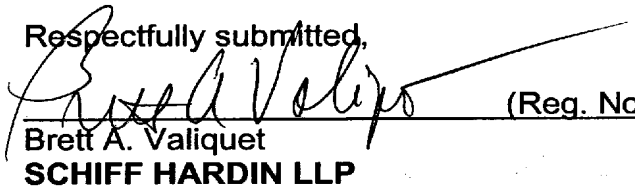
Dependent claims 15-24 distinguish at least for the reasons noted with respect to claim 14 and also by reciting additional features not suggested.

Independent claim 25 distinguishes in a manner noted above with respect to claim 14. The same is true of the computer-readable medium claim 26.

Allowance of the application is respectfully requested.

The Commissioner is hereby authorized to charge any additional fees which may be required, or to credit any overpayment to account No. 501519.

Respectfully submitted,



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